

**SECTION 2**  
**EVALUATION OF ALTERNATIVES**

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## **2.0 EVALUATION OF ALTERNATIVES**

In addition to the proposed transmission line route identified in Section 1, BPUB studied an alternate route and a “no action alternative”. BPUB took into account engineering, economic, and right-of-way considerations, as well as environmental considerations. This section provides a description of the proposed and alternative routes, a comparison between the proposed and alternate routes, and a discussion of the no action alternative.

### **2.1 PROPOSED ROUTE**

The proposed manner of construction for the proposed route was discussed in detail in Section 1 of this report. The proposed route would exit the Silas Ray Power Plant substation, and turn north immediately after crossing the IBWC levee. After approximately 700 feet, the route would turn westerly toward the Rio Grande River, following the corridor between the Morales Banco and BPUB’s filtration plant holding pond. The proposed route appears in Photos 1-10 and is shown on the following figures:

- Figure 1 (1 inch = 2,000 feet) shows the regional location of the proposed route, the location crossing with the Rio Grande River, and the tie with the CFE transmission line.
- Figure 2 (1 inch = 300 feet) and Figure 3 (1 inch = 870 feet) are aerial photos, showing the proposed route from the Silas Ray Power Plant, the crossing with the Rio Grande River, and the tie with the CFE transmission line.
- Figures 4 and 5 show the soils map and the FEMA flood zone map along the route of the transmission line proposed by the BPUB.

### **2.2 ALTERNATE ROUTE**

The alternate route would exit the Silas Ray Power Plant substation, and after crossing the IBWC levee, would continue in a westerly direction across the Morales Banco and private agricultural fields to the Rio Grande River. Figure 7 illustrates the alignment of the alternate route considered for the proposed transmission line interconnection. Photos 11 and 12 show the alternate route looking toward the Silas Ray Power Plant and at the alternate Rio Grande River crossing location.

### 2.3 COMPARISON OF PROPOSED AND ALTERNATE ROUTES

The following summarizes a comparison of the alternate route as compared to the proposed route.

- The alternate route would have an approximate length (to the Rio Grande River from the substation) of 3,200 feet as compared to the approximately 3,000-foot proposed route.
- The alternate route would require an approximate 500-foot span across the existing wetland (Morales Banco pond, see Figure 1), directly west of the Silas Ray Power Plant substation. The proposed route would not cross this wetland.
- The alternate route would require an easement across private property of approximately 2,700 feet, whereas the proposed route is all on BPUB property on the U.S. side of the Rio Grande River.
- The alternate route would require crossing an existing agricultural field (approximately 1,900 feet), whereas the proposed route will parallel an existing BPUB road. Five to six structures would be required in the agricultural field disrupting planting, harvesting and maintenance of crops in the field.
- Approximately 93 percent of the alternate route would be constructed within the IBWC jurisdictional floodway, the same as the proposed route.
- The alternate route would require tree trimming for approximately 100 feet along the 50-foot right-of-way as compared to approximately 1,200 feet of tree trimming along the proposed route (one side of the ROW, only).
- The proposed route would require tree removal at three structure locations within a working area of 400 square feet (i.e., 20 x 20 feet) for each of the three structure locations. The alternate route would not require tree removal.

The alternate route was investigated and evaluated for construction of the proposed line. Meetings and discussions with the private landowner indicated difficult negotiations to secure the required right-of-way through the existing agricultural field.

### 2.4 NO ACTION ALTERNATIVE

Under the No Action Alternative, BPUB would not construct or operate the proposed 138-kV transmission line. Benefits from the Project, as described in Section 1, would not be realized. Potential impacts related to the Project, whether short or long term, direct or indirect, would not occur.

The No Action Alternative would reduce BPUB's ability to accommodate CFE's need for additional power. Overall, there would be a loss of economic benefits associated with the Project including purchase of materials, construction costs, and local labor costs. The No Action Alternative could also result in increased

costs to BPUB customers by reducing revenue produced from the sale of excess electric power to CFE.

Other options for providing power to CFE could also result including the construction of transmission lines in different locations, or the construction of new power plants, either in the U.S. or northern Mexico. The environmental impacts from the construction of other transmission lines would most likely be similar or greater in degree and scope, since it is unlikely that a significantly shorter or more direct route to the border could be found. The construction of a new power plant, on either side of the border would generally result in even greater impacts.